

REMARKS

Claims 2 and 5-20 are pending in the present application. Claim 15 has been amended.

35 U.S.C. §103, Obviousness

The Examiner has rejected claims 2, 5-7, 9, 13, 14, 18 and 20 under 35 USC §103 as being unpatentable over Longo (US Pat. No. 5,592,717) in view of Albritton (US Pat. No. 6,488,268). This rejection is respectfully traversed.

In rejecting the claims, the Examiner writes:

Regarding claim 5, Longo discloses a vehicle barrier system (10, Fig. 1) including a barrier (12) movable between an open position to allow vehicle access therethrough and a closed position which prevents vehicle access therethrough (col. 2, lines 46-49), said barrier system being attached to barrier supports (46) at either end of said barrier. However, Longo fails to disclose that said barrier supports are secured to a slide plate which will slide after a predetermined force is applied thereto by vehicle impact with said barrier to absorb the impact energy of said vehicle, wherein movement of the slide plate is controllable by the shearing of at least one rivet securing said slide plate to at least one fixed surface on which it slides, said at least one rivet protruding through at least one slot in said slide plate from said fixed surface. Albritton teaches that it is well known in the art to have supports (330, Fig. 10) secured to a plate (350, 352), wherein movement of the plate is controllable by the shearing (col. 3, lines 37-41) of at least one rivet (358) securing said plate to at least one fixed surface 9as seen in the modified picture below taken from Fig. 10) on which it is affixed, said at least one rivet protruding through at least one slot in said plate from said fixed surface (as seen in the modified picture below). The examiner notes that the plate will inherently slide after a predetermined force is applied thereto by vehicle impact (col. 11, lines 63-65) with said barrier to absorb the impact energy of said vehicle. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Longo to have the supports secured to a plate, as taught by Albritton, as an alternate means of mounting a support to the ground, wherein movement of the plate is controllable by the shearing of at least one rivet securing said plate to at least one fixed surface on which it is affixed.

The Examiner's rejections of independent claim 18 is substantially the same.

The prior art references, both individually and combined, do not teach the limitations of the claimed invention and do not disclose the features ascribed to them by the Examiner. The invention disclosed in Longo is an adjustable gate hinge that can match the angle of a gate to the angle of the terrain over which the gate must open. Figure 3 in Longo best illustrates the operation of that invention.

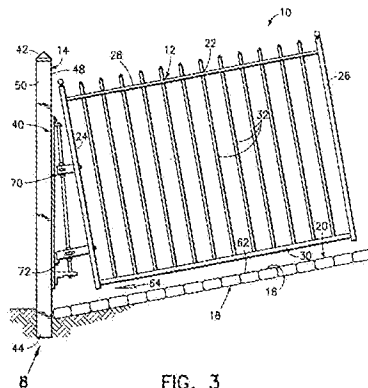


FIG. 3

The Examiner admits that, aside from a barrier and side supports, most of the key limitations of the present invention are missing from Longo. In addition, the swinging gate shown in Longo is not an effective vehicle barrier. It might damage a moving vehicle but would most likely not stop it.

The Albritton reference discloses a breakaway support post of highway guardrails. Conceptually and structurally, Albritton has little relation to either Longo or the present invention.

The Albritton invention does not include a sliding plate. The features to which the Examiner refers as sliding plates (350, 352) are not in fact plates at all but rather breaker bars in the middle of support post. They function as the breaking point of the support post (330) and do not function at all as sliding plates in the manner recited in the present claims, as is clearly visible in Figs. 10 and 11 from Albritton:

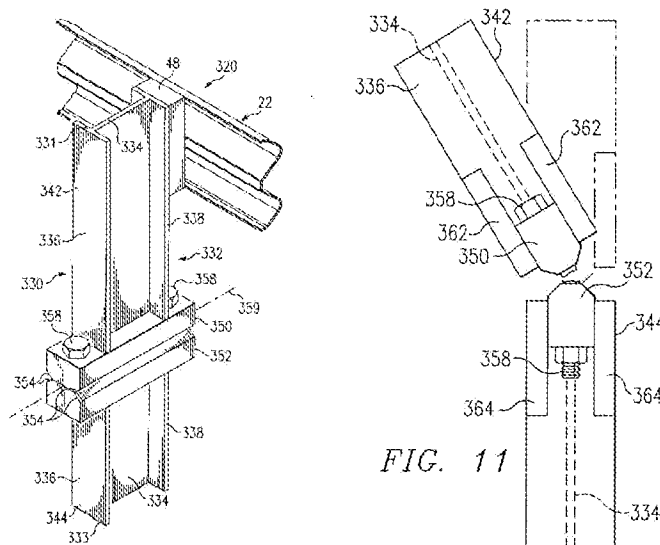


FIG. 11

Specifically, with regard to the breaker bars, Albritton teaches:

Upper portion 342 and lower portion 344 are provided with breaker bars 350 and 352. In the embodiment shown in FIG. 10, flanges 336 and 338 in upper portion 342 are connected to breaker bar 350, by for example, welds. Flanges 336 and 338 in lower portion 344 may be connected to breaker bar 352 in an analogous fashion. Other suitable connection techniques may be used to couple flanges 336 and 338 of upper and lower portions 342 and 344 to breaker bars 350 and 352, respectively. For example, as illustrated in FIG. 11, tie straps 362 and 364 may be used, particularly in an embodiment where breaker bars 350 and 352 are narrower than flanges 336 and 338, as is the case in FIG. 11. For some applications, breaker bar 352 may be directly attached to a concrete foundation to eliminate the use of lower portion 344.

Breaker bars 350 and 352 are connected to each other by fasteners 358, which is illustrated by a simple nut and bolt; however, other suitable fasteners may be used with this aspect of the invention. Breaker bars 350 and 352 are preferably formed with chamfered or tapered surfaces 354. Chamfered surfaces 354 cooperate with each other to define in part a notch or gap between adjacent portions of breaker bars 350 and 352. Chamfered surfaces 354 extend generally parallel with each other in a direction generally normal to guardrail 22. An imaginary line 359 can also be drawn through fasteners 358 in the same general direction parallel with chamfered surfaces 354 and normal to guardrail 22. Imaginary line 359 corresponds with a strong direction for breakaway support posts 330 in which breakaway support post 330 exhibits high mechanical strength. There is a notch or gap on each side of the imaginary line 359. impacting vehicle back onto the associated roadway during a rail face impact with guardrail 22. (col. 11, lines 33-65)

Impact from the weak direction for support post 330 will result in bending and preferably failure of connecting members 358. Failure of connecting members 358 separates upper portion 342 from lower portion 344 and may, therefore, substantially minimize damage to a vehicle during a head-on impact with the end of guardrail 22 facing oncoming traffic. (col. 12, lines 13-19)

Nothing in the description or illustration of the break bar in Albritton teaches or suggests that it is a sliding plate that slides on a fixed surface and is controlled in its movement by rivets that secure it to the fixed surface. As illustrated in Figures 11 and 13, the break bars are clearly the tapered contact ends of the upper and lower portions of the support pole.

The Examiner's general assertion that the break bar would inherently slide in response to impact force is without support. As illustrated in Figures 11 and 13, the tapered shape of the break bars is designed to produce a pivot action (not sliding) at the point of contact to allow the upper portion of the support pole to properly break away from the lower portion. In other words, the break bars are designed to snap, not slide.

In addition, as explained in the quoted text, the connecting members (358) are designed to preferably fail to allow the upper portion of the support pole to separate from the lower portion. In the claimed invention, the barrier, barrier supports and sliding plate do not break away. That is the whole point of the invention. It is not a safety device like a highway guardrail. The barrier absorbs vehicle impact, but it does not collapse in response to impact the way the breakaway support pole in Albritton does.

The only thing that breaks away in the claimed invention are the rivets (60, 64, 68), which merely control the movement of the sliding plate (52) as they shear away, as illustrated in Figure 6C below. They do not shear away as a way to facilitate the breaking away of any support structure, as is taught in Albritton.

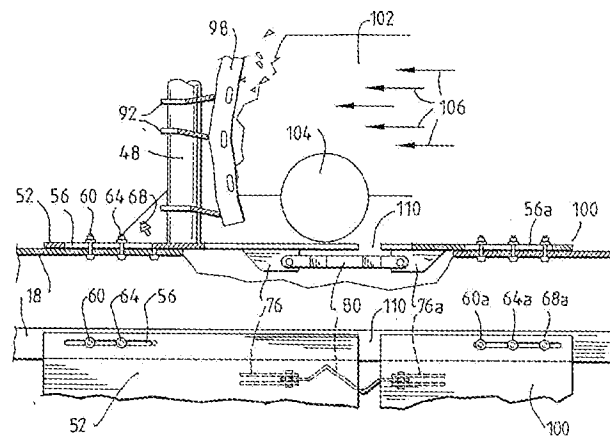


Fig. 6c

The Examiner does not explain how the breakaway support structure for a highway guardrail taught in Albritton could be combined with the gate hinge design taught in Longo. Applicant respectfully asserts that the Examiner is using hindsight provided by the present invention as motivation to combine the teachings of Albritton with those of Longo. Furthermore, such a combination does not make sense. If a breakaway support pole like the one taught in Albritton was used to mount the gate hinges taught in Longo, the resulting device would function as an extremely poor vehicle barrier and would undermine the whole purpose of putting up a gate in the first place.

However, assuming the combination of the references *arguendo*, the resulting combination would not produce the limitations of the claimed invention for the reasons explained above. The present invention is not a breakaway gate, which is what would result from the combination of Albritton and Longo.

Because claims 2, 6-7, 9-17 and 20 depend from claims 5 and 18 respectively, they are distinguished from the prior art references for the reasons explained above. In addition, the dependent claims recited limitations not taught or suggested in the references.

For example, claim 2 recites that the slide plate is long enough to have a part of the vehicle sitting upon it at impact (see Figure 6C above). Neither Longo or Albritton disclose a sliding plate under the vehicle.

As another example, claim 6 recites a pair of slots being provided, wherein the slide plate rests on the fixed surface which is formed by a pair of ground engaging beams aligned with respective slots. Neither Longo nor Albritton disclose a pair of ground engaging beams upon which a sliding plate rests. As explained above, Albritton does not disclose a sliding plate. Furthermore, the "slots" to which the Examiner refers in Fig. 10 of Albritton are not even illustrated or described in Albritton but are merely holes for the connecting members (358). The Examiner has taken the liberty of altering Fig. 10 and naming them slots without any support in Albritton. In addition, the pair of ground engaging beams in Albritton to which the Examiner refers are in fact flanges (336, 338) on opposite sides of a single I-beam. (See col. 11, lines 24-28)

Claim 15 recites the barrier forming part of a ramp in its open position and pivotally attached at either side to the slide plate to be raised from the slide plate to a substantial vertical position to its closed position. As explained above, none of the references disclose a slide plate. Therefore, the Examiner's proposed combination of Longo and Albritton with Dickinson (US Pat. No. 6,382,869) would not produce the limitations of claim 15. In addition, such a combination makes no sense. If the barrier was a plate that pivoted up from a position flat with the ground (as taught in Dickinson), why would it need the adjustable hinge taught in Longo, since it does not have to swing over the ground from a vertical support pole? For that matter, what would be the purpose of a breakaway support pole as taught in Albritton if the barrier pivots from a point on the ground and is not supported by poles?

As a last example, claim 17 recites further support coupled at the rear of barrier (in claim 15) to further assist in preventing collapse of said barrier from vehicular impact when said barrier is in its substantial vertical position. Again, the Examiner proposed combining with Dickinson with Longo and Albritton, but such a combination makes no sense and does not result in the limitations recited in claim 17. Why would someone of skill in the art reinforce a barrier like the one shown in Dickinson to prevent collapse of the barrier but at the same time combine it

with a breakaway support pole like the one taught in Albritton that is specifically designed to collapse upon impact? This is a direct contradiction of purposes.

Therefore, it is respectfully asserted that the rejection of claims 2, 5-7, 9-15, 17, 18, and 20 under 35 USC §103 has been overcome and should be withdrawn.

Conclusion

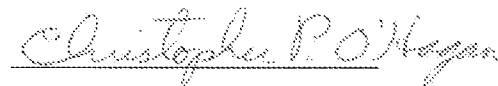
Applicant respectfully submits that all existing claims are now in a condition for allowance.

If there are any outstanding issues that the Examiner feels may be resolved by way of telephone conference, the Examiner is invited to call Colin Cahoon or Chris O'Hagan at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

The Commissioner is hereby authorized to charge any payments that may be due or credit any overpayments to CARSTENS & CAHOON, L.L.P. Deposit Account 50-0392.

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Respectfully submitted,



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